



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,156	04/10/2007	Christopher James Newton Fryer	1788.004.US	1688
85582	7590	04/15/2011	EXAMINER	
Multi-Fineline Electronix, Inc. c/o Keating & Bennett, LLP 1800 Alexander Bell Drive Suite 200 Reston, VA 20191			FRY, MATTHEW A	
		ART UNIT	PAPER NUMBER	
		2629		
		NOTIFICATION DATE	DELIVERY MODE	
		04/15/2011	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@kbiplaw.com
jkeating@kbiplaw.com

Office Action Summary	Application No.	Applicant(s)
	10/598,156	FRYER ET AL.
	Examiner MATTHEW A. FRY	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 January 2011.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 and 13-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-7 and 13-16 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftperson's Patent Drawing Review (PTO-941)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 7/1/10

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/18/11 has been entered.

Response to Arguments

2. Applicant's arguments filed 1/18/11 have been fully considered but they are not persuasive.

3. Applicant argues (remarks page 8) that one of ordinary skill in the art would have understood the ground point of a device to be a power terminal that is not arranged to oppose the first electrode. The Examiner respectfully disagrees. Reference to a "ground point" is not indicative of the location or orientation of a second electrode. As such, the Examiner considers this to be new matter. Further, should the Applicant assert that the ground point of a device is understood by one of ordinary skill in the art device to be a power terminal that is not arranged to oppose the first electrode, it would not be considered a reason for allowance as the Applicant has asserted it is well known in the art.

4. Applicant argues (Remarks page 9) that Herbert fails to teach or suggest the feature of a second electrode defined by a power terminal of a circuit that is not arranged to oppose the first electrode to activate the display. However, as can be seen in figure 6, the circuit (36) for activating the display does not oppose the first electrode of C1. The Examiner considers the ground terminal (connected to C1) to be a power terminal of circuit 36.

Claim Objections

5. Claims 1 and 16 are objected to because of the following informalities: recite the limitation "a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining a single electrode". It is not particularly clear by this limitation. The Applicant has used three labels to describe what would appear to be a single element. Rather than use of the word "define", the Examiner would suggest amending to replace with "is".

6. Claims 13 and 15 are similarly objected to. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 13 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 13 and 15 recite new limitation "that is not arranged to oppose the first electrode to activate the display" which is not described by the original specification and is considered new matter.

9. Claims 1, 13 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 13 and 15 discuss two electrodes of a capacitor not opposing each other. For a capacitor to function, and thus a capacitance sensor, the two electrodes must oppose each other in some form. The invention, as currently claimed, can not function as a capacitor.

10. Claims 1, 13 and 15 are further unclear what is intended by "opposed". For the sake of applying prior art, the Examiner has interpreted it to mean directly across from and parallel to.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1,13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 13 and 15 recite "a second

electrode defined by one of...a power terminal of a circuit that is arranged to drive or control the display and that is not arranged to oppose the first electrode to activate the display. " It is unclear if the current limitation is referring to the second electrode, the power terminal or the circuit which does not oppose the first electrode.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 3, and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbert (US 5,777,596).

15. In regards to claim 1, Herbert discloses a display comprising: a capacitance sensor (34), arranged to detect a presence of a user, and including: a first electrode (16) defined by a frontmost electrode of the display, the frontmost electrode defining a single electrode that is used both as a display electrode arranged to activate the display and a sensing electrode of the capacitance sensor to detect the presence of the user; and a second electrode (18) defined by one of a case of the display and a power terminal (ground) of a circuit that is arranged to drive or control the display and that is not arranged to oppose the first electrode to activate the display (circuit 36 does not oppose the first electrode) (see figure 5 and 6; abstract; Col 2, lines 31-56; Col 4, lines 6-23; Col 5, lines 32-38).

16. In regards to claim 3, Herbert discloses a display according to claim 1, in which the capacitance sensor further includes electronics (38) arranged to measure the capacitance between the first electrode and the second electrode and to output a signal based upon the measurement of the capacitance (see figure 5 and 6; abstract; Col 2, lines 31-56; Col 4, lines 6-23; Col 5, lines 32-38).
17. In regards to claim 5, Herbert discloses a display according to claim 3, further comprising circuitry (36) arranged to activate the display based upon the signal (see figures 5 and 6).
18. In regards to claim 6, Herbert discloses a display according to claim 1, in which the power terminal is a ground terminal (see figure 6).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 2, 4, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbert (US 5,777,596) in view of Nakazono et al (JP9251820).
21. In regards to claim 2, Herbert discloses a display according to claim 1, but does not explicitly teach an EL display.

Nakazono teaches a display comprising an electroluminescent display capable of detecting a touch (abstract).

It would have been obvious to one of ordinary skill in the art to modify Herbert with Nakazono as EL displays are well known in the art. Further, both inventions are in the same field of endeavor, providing a touch screen where both the display and sensor share electrodes, and both an LC display and an EL display function in similar capacitive manners.

22. In regards to claim 4, Herbert as modified discloses a display according to claim 2, in which the first electrode is arranged to activate light-emitting areas of the electroluminescent display (see Nakazono abstract).

23. In regards to claim 13, Herbert discloses a display comprising: a capacitance sensor (34) including: a first electrode (16) defined by a frontmost electrode of the display and arranged to activate areas of the display; a second electrode (18) defined by one of a case of the electroluminescent display and a power terminal (ground) of a circuit that is arranged to drive and control the display and that is not arranged to oppose the first electrode to activate the display; electronics (38) arranged to: measure the capacitance between the first electrode and the second electrode; to determine a presence of a user; provide a signal based upon the determination of the presence of a user; and activate the display based upon the signal (Col 9, lines 14-32) (see figure 5 and 6; abstract; Col 2, lines 31-56; Col 4, lines 6-23; Col 5, lines 32-38). Herbert does not explicitly disclose an EL display.

Nakazono teaches a display comprising an electroluminescent display capable of detecting a touch (abstract).

It would have been obvious to one of ordinary skill in the art to modify Herbert with Nakazono as EL displays are well known in the art. Further, both inventions are in the same field of endeavor, providing a touch screen where both the display and sensor share electrodes, and both an LC display and an EL display function in similar capacitive manners.

24. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbert (US 5,777,596) in view of Serrano (US 4,290,061).

25. In regards to claim 14, Herbert discloses a display comprising: a capacitance sensor (34) arranged to detect a presence of a user and including a first electrode (16) defined by a front electrode of the display (see figure 5 and 6; abstract; Col 2, lines 31-56; Col 4, lines 6-23; Col 5, lines 32-38). Herbert does not explicitly disclose a protection member.

Serrano discloses a touch sensor comprising a protection diode (118) arranged to protect the capacitance sensor (112) from an excessive voltage on the front electrode and including: a first end connected to the front electrode (58); and a second end connected to at least one circuit element of the capacitance sensor (112) (see figure 7; Col 7, lines 51-68).

It would have been obvious to one of ordinary skill in the art to modify Herbert with Serrano as they are both in the same field of endeavor (capacitive touch sensors) and the use of a protection member, or diode, in a capacitive touch sensor is well known in the art and would have been an obvious design choice.

26. In regards to claim 15, Herbert as modified discloses a display according to claim 14, wherein: the capacitance sensor further includes a second electrode (18, part of C1) defined by one of a case of the display and a power terminal (ground) of a circuit that is arranged to drive or control the display and that is not arranged to oppose the first electrode to activate the display (circuit 36 does not oppose the first electrode); and the front electrode defines a single electrode that is used both as a display electrode arranged to activate the display and as a sensing electrode of the capacitance sensor to detect the presence of the user (see Herbert figure 4; Col 6, lines 19-30, 35-43; Col 7, line 60- Col 8, line 17).

27. In regards to claim 16, Herbert as modified discloses a display according to Claim 14, wherein the front electrode defines a single electrode that is used both as display electrode arranged to activate the display and as a sensing electrode of the capacitance sensor to detect the presence of the user (see Herbert figure 4; Col 6, lines 19-30, 35-43; Col 7, line 60- Col 8, line 17).

28. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herbert (US 5,777,596) in view of Nakazono et al (JP9251820) and further in view of Serrano (US 4,290,061).

29. In regards to claim 7, Herbert as modified discloses a display according to claim 5, but does not explicitly disclose a diode.

Serrano teaches a capacitive touch sensor in which a diode (118) is arranged to protect either the capacitance sensor or the circuitry arranged to activate the display (see figure 7; Col 7, lines 51-68).

It would have been obvious to one of ordinary skill in the art to modify Herbert with Serrano as they are both in the same field of endeavor (capacitive touch sensors) and the use of a protection member, or diode, in a capacitive touch sensor is well known in the art and would have been an obvious design choice.

Conclusion

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW A. FRY whose telephone number is (571) 270-7355. The examiner can normally be reached on Monday thru Friday, 8:00 AM to 5:00 PM, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629

/MATTHEW A FRY/
Examiner, Art Unit 2629